

### REMARKS/ARGUMENTS

Claims 1, 10, 19, 32, 37, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54 and 55 have been amended to further particularly point out and distinctly claim subject matter regarded as the invention. Support for these changes may be found in the specification, page 12, lines 5-12; page 10, line 18- page 11, line 17; page 16, lines 4-19; and page 18, line 19- page 19, line 14. The text of claims 2-9, 11-18, 20-31, and 38-39 is unchanged, but their meaning is changed because they depend from amended claims.

New claims 56-97 also particularly point out and distinctly claim subject matter regarded as the invention. Support for these claims may be found in the specification, page 12, lines 5-12.

### The 35 U.S.C. § 102 Rejection

Claims 32, 45, 50 and 55 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Civanlar et al.<sup>1</sup> The Office Action states that Civanlar teaches

“a memory (see Fig.2, #200 and col.4, lines 29-30); a network interface coupled to said memory (see Fig.2, #201 or #202 and col.4, lines 30-34); and a processor (see Fig.2, #204 and col.4, lines 34-35 & 40) for performing the steps of: receiving the request at a switch or router (see col.3, lines 37-41 and col.6, lines 66-67); examining an original location address in a header in the request (see col.3, lines 58-62); comparing (see col.4, lines 3-7) said original location address with one or more entries in a table in a cache (see Fig.2, #209 & #240 and col.4, lines 36-37) coupled to said switch or router (see Fig.2), if said cache exists (see col.4, lines 35-38 & 40-42 and col.4, line 67 to col.5, line 3); forwarding the content from said cache to said user if an entry in said table in said cache has an original location field identical to said original location address (see col.8, lines 23-28 and col.10, lines 6-7); and transferring said request to another switch or router if said cache does not exist or said cache does not have an entry in said table with an original location field identical to said original location address (see col.9, lines 4-7).”

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<sup>1</sup> U.S. Patent 6,078,963

Office Action, page 3. The Examiner also noted that a “distributed cache system” would be an additional basis of rejection. Examiner Interview, April 2, 2004. This rejection is respectfully traversed.

According to the M.P.E.P., a claim is anticipated under 35 U.S.C. § 102(a), (b) and (e) only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.<sup>2</sup>

Applicants maintain that neither Civanlar nor a distributed cache system teach “transferring said request to a second cache closer to the original location address than said first cache as determined by a distance field in said first cache and a distance field in said second cache, if said first cache does not exist or said first cache” according to Claim 1 as amended.

Civanlar teaches a system and method that reduces the bottlenecking problems associated with a centralized routing and forwarding engine. Civanlar’s router has a plurality of intelligent router ports (103 of Fig. 1 and Col. 3, line 14), where each intelligent router port may have its own routing and/or forwarding engines (105 of Fig. 1 and col. 3, lines 43-45) so that a centralized master routing and forwarding engine is unnecessary. Col. 1, lines 57-58. The system of Civanlar forwards two types of packets: 1) data packets to be routed in a network; and 2) routing protocol packets for updating the routing tables of each intelligent router. However, neither Civanlar’s forwarding of data packets nor routing protocol packets anticipates “transferring said request to a second cache” according to Claim 32.

Routing protocol packets are transferred to every other intelligent router port for updating each of the routing databases 104. Civanlar, Col. 3, line 44-49. Therefore they are transferred to

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<sup>2</sup> Manual of Patent Examining Procedure (MPEP) § 2131. See also *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

all of the other intelligent router ports in the network (Civanlar, Col. 43-49) and not “a second cache closer to the original location address than said first cache.” Furthermore, there is no decision on which router port to transfer the protocol packets based upon distance considerations. Instead, the packets are automatically forwarded to all the other intelligent router ports. In fact, as the Examiner correctly admits in page 6 of the Office Action, Civanlar does not even teach the storing of a distance field indicating a distance from said particular cache to the original location of said content. Accordingly, Civanlar cannot teach “transferring a request...determined by a distance field in said first cache and a distance field in said second cache, if said first cache does not exist or said first cache does not have an entry in said table with an original location field identical to said original location address.” These arguments apply to a distributed cache system as well, where cached data is forwarded in the same manner as the routing protocol packets of Civanlar.

Likewise, the data packets to be routed in Civanlar are sent to a pre-determined routers based upon information contained in a routing table.

Routing tables and/or other similar data may relate one or more addresses (e.g. Internet protocol (IP) packet addresses contained in IP headers) received on a network interface 110 with one or more outgoing intelligent router ports 103 interconnected via the switching fabric 102. For example, the routing table may indicate that all data packets having a particular IP address should be output on the switching fabric 102 to intelligent router port A.

Civanlar, Col. 3, lines 58-65. Therefore, the decision on where to forward to packet is not “determined by a distance field in said first cache and a distance field in said second cache, if said first cache does not exist or said first cache does not have an entry in said table with an original location field identical to said original location address.”

Applicants submit that claim 32 is in condition for allowance. Independent claims 45, 50 and 55 contain similar distinctive features. For the same reasons, Applicants submit independent claims 45, 40 and 55 are in a condition for allowance. Accordingly, it is respectfully requested that the rejection of these claims be withdrawn.

**The First 35 U.S.C. § 103 Rejection**

Claims 37 and 40, which are independent claims, stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Civanlar et al.

**Claim 37**

As per claim 37, the Office Action states that Civanlar

“teaches of an apparatus for updating content in a computer network including: “a cache (see Fig. 2, #203); a routing table entry creator (see col.3, lines 23-27) coupled to said cache; and a routing table entry forwarder (see Fig. 1, #105) coupled to said cache and to said routing table entry creator.”

Office Action, page 4. The Office Action further states that

“Civanlar does not explicitly teach of a routing table entry creator as its own device or module, but it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ any various integration of the modules so long as the functionality of the apparatus as a whole remain the same (See Civanlar, col.2, lines 46-53; col.4, lines 47-58; and col.5, lines 4-5).”

Office Action, page 4. The Office Action admits that Civanlar does not teach a routing table entry creator as its own device or module,<sup>3</sup> but does not provide a specific reference where such a limitation is found, instead arguing that one of ordinary skill in the art would have found it obvious to modify the invention in Civanlar to arrive at the additional claim limitation.

Therefore, applicants assume that the Office Action intended to take official notice of facts under M.P.E.P. 2144.03 that the rationale supporting the obviousness rejection is based on common knowledge in the art or “well-known” prior art. Under M.P.E.P. 2144.03, “[i]f the applicant traverses such an assertion the examiner should cite a reference in support of his or her position.” Applicants hereby traverse the assertion and request that a reference be cited in support of the position outlined in the Office Action, ¶ 11.

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<sup>3</sup> Office Action ¶ 11.

Moreover, Civanlar does not teach “a distance field indicating the distance from said cache to the original location of said content, wherein said distance field is utilized upon receiving a request, said request including a SYN packet and an HUP packet.” As the Examiner correctly stated in page 6 of the Office Action, Civanlar does not even teach the storing of a distance field indicating a distance from said particular cache to the original location of said content. Furthermore, Civanlar does not teach or suggest SYN packets, HUP packets or their equivalents.

#### **Claim 40**

As per claim 40, the Office Action states that Civanlar teaches:

“an apparatus for handling a request for content from a user in a computer network, including: a request receiver (see Fig.2 #202 or #212); a cache (see col.7, lines 3-4 & 24-28); an original location address examiner coupled to said request receiver and to said cache (see col.7, lines 3-4 & 24-28); an original location address comparator coupled to said original location address examiner and to said cache receiving the request at a switch or router (see col.7, lines 3-4 & 24-28); a content forwarder (see Fig.1, #105) coupled to said original location address comparator and to said cache; and a request transferer (see Fig.2, #202 or #212) coupled to said request receiver (see fig.2, #202 or #212) and to said original location address comparator.”

Office Action, pages 4-5. The Office Action further states,

“Civanlar does not explicitly teach of the coupling of the devices or modules, but it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ any various integration of the modules so long as the functionality of the apparatus as a whole remain the same. see col.2, lines 46-52; col.4, lines 47-58; and col.5, lines 4-5.”

Office Action, page 5.

The Office Action admits that Civanlar does not teach coupling of the devices or modules,<sup>4</sup> but does not provide a specific reference where such a limitation is found, instead arguing that one of ordinary skill in the art would have found it obvious to modify the invention

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<sup>4</sup> Office Action ¶ 3.

in Civanlar to arrive at the additional claim limitation. Therefore, applicants assume that the Office Action intended to take official notice of facts under M.P.E.P. 2144.03 that the rationale supporting the obviousness rejection is based on common knowledge in the art or “well-known” prior art. Under M.P.E.P. 2144.03, “[i]f the applicant traverses such an assertion the examiner should cite a reference in support of his or her position.” Applicants hereby traverse the assertion and request that a reference be cited in support of the position outlined in the Office Action, ¶ 3.

Moreover, Civanlar does not teach “a request receiver for receiving a request, said request including a SYN packet and an HUP packet” according to claim 40. Nowhere does Civanlar mention SYN packets, HUP packets, or their equivalents.

Applicants respectfully maintain that independent claims 37 and 40 are in condition for allowance. Accordingly it is respectfully requested that the rejection of these claims be withdrawn.

**The Second 35 U.S.C. § 103 Rejection**

Claims 1-5, 10-14, 19-23, 28, 29, 33, 38, 39, 41-44, 46-49 and 51-54 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Civanlar et al. in view of Green<sup>5</sup>, among which claims 1, 10, 19, 41-44, 46-49 and 51-54 are independent claims. This rejection is respectfully traversed.

**Claims 1, 41, 46 and 51**

As per claim 1, 41, 46, and 51, the Office Action states that Civanlar teaches a method, a program, and apparatus including:

“a memory (see Fig.2, #200 and col.4, lines 29-30); a network interface coupled to said memory (see Fig.2, #201 or #202 and col.4, lines 30-34); and a processor (see Fig.2, #204 and col.4, lines 34-35 & 40) for performing the steps of: forwarding the content to one or more caches (see col.8, lines 4-6) distributed throughout the computer network (see col.1, lines 50-52), each of said caches coupled to a switch or router (see Fig.2); storing the content in each of said one or more caches (see col.3, lines 53-55 and col.4, line 67 to col.5, line 3); and storing a record identifying said content in each of said one or more caches (see col.3, lines 54-55: “and/or other data for use by the forwarding engine 105 and routing engine 107”) said record having an original location field identifying the original location of said content (see col.7, lines 3-4 & 24-28).”

Office Action, pages 5-6. It is further stated that that “Civanlar does not teach of said record having a distance field indicating a distance from said particular cache to the original location of said content, and a field indicating a version number of said content. However, the Office Action cites Green for “teaching of said record having a distance field indicating a distance from said particular cache to the original location of said content (see Fig.3C, #79; col.7, lines 56-52; and col.8, lines 47-50), and a field indicating a version number of said content (see Fig.3B, #84 and col.7 lines 26-31).” The Office Action further alleges that

“it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Green within the system of Civanlar by implementing distance and version number field within the method, program, and

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<sup>5</sup> U.S. Patent 5,517,494



apparatus for making content available for users in a computer network because Civanlar teaches that other data may be used by the forwarder (see col.3, lines 54-55) and 'routing tables and/or other similar data' relates to the data received (see col.3, lines 58-62).'

Therefore, any data relevant to the request and response could be employed to efficiently perform the same so long as too many entry fields are not used which would not result in a degradation of performance."

Office Action, page 6. Applicants respectfully disagree for the reasons set forth below.

The secondary reference, Green does not teach a distance field that "is utilized upon receiving a request, said request including a SYN packet and an HUP packet. Green does not even mention SYN packets, HUP packets, or their equivalents. Thus, Civanlar, whether considered alone or combined with or modified by Green does not teach or suggest the claimed invention.

Applicants submit that claim 1 is in condition for allowance. Other independent claims 41, 46, and 51 contain similar distinctive features as claim 1. For the same reasons, Applicants submit that claims 41, 46 and 51 are also in condition for allowance. Accordingly, it is respectfully requested that the rejection of these claims be withdrawn.

**Claims 10, 42, 47 and 52.**

As per claims 10, 42, 47 and 52, the Office Action states that Civanlar teaches a method, program, and apparatus including:

"a memory (see Fig.2, #200 and col.4, lines 29-30); a network interface coupled to said memory (see Fig.2, #201 or #202 and col.4, lines 30-34); and a processor (see Fig.2, #204 and col.4, lines 34-35 & 40) for performing the steps of receiving the content forwarded from the original location (see col.6, line 66 to col.7, line 1); storing the content in a cache (see col.3, lines 53-55; col.4, line 67 to col.5, line 3; and col.8, lines 4-6) coupled to a switch or router (see Fig.2); and storing a record identifying the content in said cache (see col.3, lines 54-55: "and/or other data for use by the forwarding engine 105 and routing engine 107"), said record having an original location field identifying the original location of said content (see col.7, lines 3-4)."

Office Action, page 7. It is further stated that Civanlar does not explicitly teach said routing table entry having a distance field indicating the distance from said cache to the original location

of said content, and a version number field indicating a version number of said content.

However, the Office Action alleges that “Green teaches of said routing table entry having a distance field indicating the distance from said cache to the original location of said content, and a version number field indicating a version number of said content (see claim 1 rejection above).” Office Action, page 7. The Applicants respectfully disagree for the reasons set forth below.

As discussed above, the secondary reference, Green does not teach a distance field that “is utilized upon receiving a request, said request including a SYN packet and an HUP packet” according to claim 10 as amended. Thus, Civanlar, whether considered alone or combined with or modified by Green does not teach or suggest the claimed invention.

Applicants submit claim 10 is in a condition for allowance. Other independent claims 42, 47, and 52 contain similar distinctive features as claim 10. For the same reasons, Applicants submit claims 42, 47 and 52 are also in condition for allowance. Accordingly, it is respectfully requested that the rejection of these claims be withdrawn.

**Claims 19, 43, 44, 48, 49, 53, and 54.**

As per claims 19, 42, 44, 49, 53, and 54, page 8 of the Office Action states that “Civanlar teaches a method, program and apparatus including:

a memory (see Fig.2 #200 and col.4, lines 29-30); a network interface coupled to said memory (see Fig.2, #201 or #202 and col.4, lines 30-34); and a processor (see Fig.2, #204 and col.4, lines 34-35 & 40) for performing the steps of: creating a routing table entry for the content in a cache (see col.3, lines 24-26 & 30-37 and col.8, lines 4-6), said routing table entry having an original location field identifying the original location of said content (see col.7, lines 3-4); forwarding said routing table entry to another of one or more caches in the computer network to allow said another of one or more caches to create a routing table entry for the content (see col.3, lines 41-47); and repeating said creating and forwarding for each of said one or more caches (see col.3, lines 41-47).”

Office Action, page 8. It is further stated that “Civanlar does not explicitly teach said routing table entry having a distance field indicating the distance from said cache to the original location of said content, and a version number field indicating a version number of said content.” Office Action, page 8. However, it is alleged that Green “teaches of said routing table entry having a distance field indicating the distance from said cache to the original location of said content, and a version number field indicating a version number of said content (see claim 1 rejection above).” Office Action, page 8.

The secondary reference, Green does not teach a distance field that “is utilized upon receiving a request, said request including a SYN packet and an HUP packet.” According to claim 19 as amended. Green does not even mention SYN packets, HUP packets, or their equivalents. Thus, Civanlar, whether considered alone or combined with or modified by Green does not teach or suggest the claimed invention. Applicants submit claim 19 is in condition for allowance. Other independent claims 43, 44, 48, 49, 53, and 54 contain similar distinctive features as claim 19. For the same reasons, Applicants submit claims 43, 44, 48, 49, 53 and 54 are also in condition for allowance.

### **Dependent Claims**

Claims 2-9 and 56-58 depend on Claim 1, Claims 11-18 and 59-61 depend on Claim 10, Claims 20-31 and 62-64 depended upon Claim 19, Claims 33-35 depend upon Claim 32, Claims 38-39 and 65-67 depend upon Claim 37, Claims 68-70 depend upon Claim 40, Claims 71-73 depend upon Claim 41, Claims 74-76 depend upon Claim 42, Claims 77-79 depend upon Claim 43, Claims 80-82 depend upon Claim 44, Claims 83-85 depend upon Claim 46, Claims 86-88 depend upon Claim 47, Claims 89-91 depend upon Claim 48, Claims 92-94 depend upon Claim

49, Claims 95-97 depend upon Claim 51. The argument set forth above is equally applicable here. The base claims being allowable, the dependent claims must also be allowable.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

**Request for Allowance**


It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Respectfully submitted,

THELEN REID & PRIEST LLP

Dated: 6/4/04

  
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Marc S. Hanish  
Reg. No. 42,626

THELEN REID & PRIEST LLP  
P.O. Box 640640  
San Jose, CA 95164-0640  
Tel. (408) 292-5800  
Fax (408) 287-8040